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WHAT IS CLAIMED AND DESIRED TO BE SECURED BY LETTERS PATENT OF THE UNITED STATES IS:

1. A method for locking onto a downstream frequency by a wireless modem in a broadband wireless access system comprising:

receiving at a radio coupled to the wireless modem, a plurality of signals at least one corresponding to a downstream signal being transmitted on a downstream frequency;

determining, at the wireless modem, if the radio is locked onto the at least one downstream signal received at the radio;

if the radio is locked onto the downstream signal, determining a center frequency of a detected frequency range corresponding to the downstream signal;

if the radio is not locked onto the downstream data signal, changing a receiving frequency of the radio by signals from the wireless user device according to a predetermined frequency plan until the receiver is locked onto the one downstream signal and then determining the center frequency of the detected frequency range;

determining a frequency offset factor; and

transmitting an instruction from the wireless modem to the radio to operate a frequency other than the center frequency, the frequency other than the center frequency being a function of the frequency offset factor and center frequency.

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- 2. The method of Claim 1, wherein the predetermined frequency plan comprises altering the frequency of the radio by a plurality of steps, each of the steps comprising a first frequency and a second frequency, the first frequency being greater than the predetermined frequency and the second frequency being less than the predetermined frequency.
- 3. The method of Claim 2, wherein the first and second frequency are separated from the predetermined frequency by approximately a same distance.
- 4. The method of Claim 3, wherein for each frequency step the same distance is approximately a multiple of the same distance of a prior frequency step of the plurality of frequency steps.
- 5. The method of Claim 1, wherein the offset factor is approximately equal to the center frequency divided by the predetermined frequency.
- 6. The method of Claim 5, wherein the receiver is coupled to a transmitter that transmits upstream signals from the wireless user device, the method further comprising offsetting a

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transmit frequency of transmitter circuitry located in the wireless user device according the frequency offset factor.

- 7. The method of Claim 5, wherein the wireless user device provides signals for upstream transmission to a transmitter that transmits at an upstream frequency, the method further comprising offsetting the upstream frequency according to the offset factor.
- 8. The method of Claim 7, wherein the wireless user device makes correction for the downstream frequency, based on corrections for the upstream frequency that are received from the hub.
- 9. A method for compensating for signal power reduction in a wireless modem, comprising:

determining a power of a received signal at a transceiver in a first downstream time slot, the power of the received signal being determined at a wireless modem coupled with the transceiver;

if the power of the received signal is within a predetermined range, instructing the transceiver to transmit in a first upstream time slot a message at a predetermined upstream power;

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if the power of the received signal is outside the predetermined range, then transmitting in the first upstream time slot the message at a power that is the upstream power plus or minus the difference between the predetermined range and the power level of the received signal in the first downstream time slot:

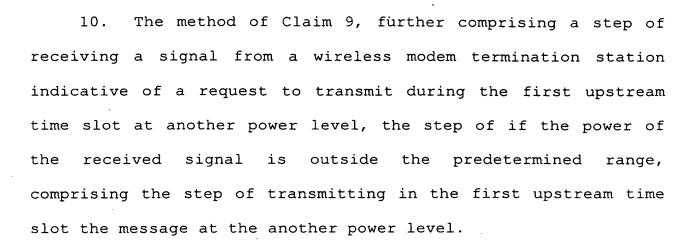
determining a power of a received signal at a transceiver in second downstream time slot, the power of the received signal being determined at a wireless modem coupled with the transceiver;

the power οf the received signal in the downstream time slot is within a . predetermined instructing the transceiver to transmit in a second upstream time slot a message at a predetermined upstream power;

if the power of the received signal is outside the predetermined range, then transmitting in the first upstream time slot the message at a power that is the upstream power plus or minus the difference between the predetermined range and the power level of the received signal in the second downstream time slot; and

ceasing upstream transmission from the transceiver until power correction information is received at the transceiver.

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- 11. The method according to Claim 1, wherein:
- said method is embodied in a set of computer readable instructions stored on a computer readable media; and

said computer readable instructions, when loaded into a computer and executed, cause the computer to perform the steps of Claim 1.

12. The method according to Claim 9, wherein:

said method is embodied in a set of computer readable instructions stored on a computer readable media; and

said computer readable instructions, when loaded into a computer and executed, cause the computer to perform the steps of Claim 9.

13. A device for locking onto a downstream frequency, comprising:

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a radio configured to,

receive a plurality of signals, at least one of said plurality of signals being transmitted on said downstream channel,

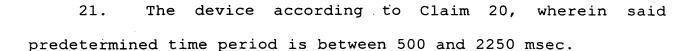
detect a center frequency of said downstream channel,

determine an offset of said downstream frequency compared to a nominal frequency,

adjust a frequency so the offset is eliminated.

- 14. The device according to Claim 13, wherein said radio is further configured to transmit an instruction to a transmitting device to adjust, corresponding to said offset, a frequency on which said downstream channel is being broadcast.
- 15. The device according to Claim 13, wherein the frequency adjusted is an output frequency of a frequency generator used by a receiver device of said radio.
- 16. The device according to Claim 15, wherein said frequency generator is a PLL of said receiver.
 - 17. The device according to Claim 13, wherein said radio is part of a wireless modem in a broadband wireless access system.

- 18. A device for compensating for signal power reduction, comprising:
- a power expectation device configured to determine an expected power level of a received signal;
- a power detection mechanism configured to determine an amount of power in a received signal;
- a calculation configured to determine if the power of the received signal is within a predetermined range of the expected power level and determine a variance between the expected power and received power level; and
- a transmitter control device configured to adjust an amount of power used to transmit a signal based on the variance if the received power is outside the predetermined range.
- 19. The device according to Claim 18, wherein said device compensates for signal power reductions in a wireless modem of a broadband wireless access system.
- 20. The device according to Claim 18, wherein said transmitter control device maintains the adjusted amount of power for a predetermined time period.



22. The device according to Claim 18, wherein the adjusted amount of power is equivalent to a difference between the power of the received signal and the expected power.